



A Note on the Kazakh Endemic *Lappula zaissanica* (Boraginaceae)

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ABSTRACT. Studies of the Kazakh endemic *Lappula coronifera* (M. Popov) subsp. *zaissanica* Aralbaev show that it is a distinct species. The new combination *Lappula zaissanica* (Aralbaev) Aralbaev is proposed.

Recent collections of an interesting *Lappula* from the Zaissan depression of eastern Kazakhstan were referred to *Lappula coronifera* by Kudabaeva & Aralbaev (1989). Subsequent collections showed that the plants represent a distinct subspecies, *L. coronifera* subsp. *zaissanica* (Aralbaev, 1990). Further studies and critical comparison with authentic plants of *L. coronifera*, as well as additional fieldwork, revealed that the plants in question represent a distinct species quite common in the Zaissan depression. A new combination is herein proposed.

Lappula zaissanica (Aralbaev) Aralbaev, comb. nov. Basionym: *Lappula coronifera* M. Popov subsp. *zaissanica* Aralbaev, Bot. Zhurn. 75: 707. 1990. TYPE: E Kazakhstan. Northern Zaissan: above Schubarschilik, sandy-pebbled desert, 8 June 1984, Aralbaev s.n. (holotype, Altay Botanical Garden, Leninogorsk (AIC); isotype, LE).

Herbs annual, 7–15(–20) cm tall. Stems 1 or several, branching at base or apex. Basal leaves rosulate, dried at fruiting time; cauline leaves sessile, lanceolate, 9–12 mm long, 1–2.5 mm wide, somewhat longitudinally folded, sparsely tomentose and greenish adaxially, moderately tomentose abaxially. Bracts shorter than fruits, lowermost oblanceolate, upper ones narrowly lanceolate. Pedicels tomentose,

as long as or slightly longer than calyx, slightly reflexed in fruit. Calyx tomentose, with bristly tubercles; lobes in fruit narrowly lanceolate, 3.5–4 mm long, slightly reflexed. Corolla blue, 3 cm long, with broadly campanulate limb. Fruit broadly ovoid; nutlets similar, with a smooth crownlike cup turning from yellow to brown as nutlets mature, each side with 6 long, glochidiate spines shorter than or nearly as long as the cup; disc not keeled, smooth, bright; gynophore 2–2.5 mm long; style exerted from nutlets by 0.2–0.3 mm.

Lappula zaissanica, which is a Kazakh endemic known thus far only from the Zaissan depression, is most closely related to *L. coronifera*, from which it differs by having nutlets with smooth, not keeled, bright-colored discs and broader wings with shorter teeth.

Additional specimens examined. KAZAKHSTAN. N **Zaissan Region:** in valleys above Kiin-Kerish, 18 May 1983, Aralbaev s.n. (paratype; AIC); Kara-Biryuk, pebbled desert, 12 June 1993, Aralbaev s.n. (Main Botanical Garden, Almaty).

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Literature Cited

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